DMR Summary Report

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Discharge Station SD008 (Pit 2W dewatering pipe outfall 070)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Bicarbonates (HCO3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	308	313	325	**315.333**
Chloride, Total	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	35.8	38.1	39	**37.633**
Flow	MG	CalMoTot	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	84.7	153.7	160	**132.8**
Flow	mgd	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	5.8	5.1	5.18	**5.36**
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	308	313	325	**315.333**
Iron, Dissolved (as Fe)	1.0 mg/L	CalMoAvg			NoDis			NoDis			NoDis			<.05	
Iron, Dissolved (as Fe)	2.0 mg/L	CalMoMax			NoDis			NoDis			NoDis			<.05	
Mercury, Total (as Hg)	ng/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	.91	<.5	<.5	**0.91**
pH	8.5 SU	InstantMax			NoDis			NoDis			NoDis			8.3	**8.3**
pH	6.5 SU	InstantMin			NoDis			NoDis			NoDis			8.3	**8.3**
Solids, Total Dissolved (TDS)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	486	526	542	**518.0**
Solids, Total Suspended (TSS)	20 mg/L	CalMoAvg			NoDis			NoDis			NoDis			<1	
Solids, Total Suspended (TSS)	30 mg/L	CalMoMax			NoDis			NoDis			NoDis			<1	
Specific Conductance, Field	umh/cm	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	872	865	819	**852.0**
Sulfate, Total (as SO4)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	121	127	128	**125.333**

Surface Discharge Station SD009 (Pit 2W dewatering pipe outfall 080)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Bicarbonates (HCO3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Chloride, Total	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Flow	MG	CalMoTot	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Flow	mgd	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Iron, Dissolved (as Fe)	1.0 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Iron, Dissolved (as Fe)	2.0 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Mercury, Total (as Hg)	ng/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
pH	8.5 SU	InstantMax			NoDis			NoDis			NoDis			NoDis	
pH	6.5 SU	InstantMin			NoDis			NoDis			NoDis			NoDis	
Solids, Total Dissolved (TDS)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Suspended (TSS)	20 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Solids, Total Suspended (TSS)	30 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Specific Conductance, Field	umh/cm	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Discharge Station SD009 (Pit 2W dewatering pipe outfall 080)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Sulfate, Total (as SO4)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	

Surface Discharge Station SD010 (Pits 2/2E/3 dewatering pipe outfall 090)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Arsenic, Total (as As)	ug/L	SingleVal			NoDis			NoDis			NoDis			NoDis	
Bicarbonates (HCO3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Chloride, Total	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Cobalt, Total (as Co)	ug/L	SingleVal			NoDis			NoDis			NoDis			NoDis	
Fibers, Ambiguous	MF/L	SingleVal				NoDis								NoDis	
Fibers, Amphibole	MF/L	SingleVal				NoDis								NoDis	
Fibers, Chrysotile	MF/L	SingleVal				NoDis								NoDis	
Fibers, Non-Amphibole Non Chrysotile	MF/L	SingleVal				NoDis								NoDis	
Fibers, Total	MF/L	SingleVal				NoDis								NoDis	
Flow	MG	CalMoTot	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Flow	mgd	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Iron, Dissolved (as Fe)	1.0 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Iron, Dissolved (as Fe)	2.0 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Mercury, Total (as Hg)	ng/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
pH	8.5 SU	InstantMax			NoDis			NoDis			NoDis			NoDis	
pH	6.5 SU	InstantMin			NoDis			NoDis			NoDis			NoDis	
Solids, Total Dissolved (TDS)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Suspended (TSS)	20 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Solids, Total Suspended (TSS)	30 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Specific Conductance, Field	umh/cm	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Sulfate, Total (as SO4)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Temperature Difference Between Sample & Reference Point in F	0 Deg F	InstantMax			NoDis			NoDis			NoDis			NoDis	
Temperature Difference Between Sample & Reference Point in F	0 Deg F	InstantMax			NoDis			NoDis			NoDis			NoDis	
Temperature, Water (C)	Deg C	CalMoMax			NoDis			NoDis			NoDis			NoDis	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Discharge Station SD011 (Pits 2/2E/3 dewatering pipe outfall 100)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Arsenic, Total (as As)	ug/L	SingleVal			NoDis			NoDis			NoDis			NoDis	
Bicarbonates (HCO3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Chloride, Total	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Cobalt, Total (as Co)	ug/L	SingleVal			NoDis			NoDis			NoDis			NoDis	
Fibers, Ambiguous	MF/L	SingleVal				NoDis								NoDis	
Fibers, Amphibole	MF/L	SingleVal				NoDis								NoDis	
Fibers, Chrysotile	MF/L	SingleVal				NoDis								NoDis	
Fibers, Non-Amphibole Non Chrysotile	MF/L	SingleVal				NoDis								NoDis	
Fibers, Total	MF/L	SingleVal				NoDis								NoDis	
Flow	MG	CalMoTot	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Flow	mgd	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Iron, Dissolved (as Fe)	1.0 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Iron, Dissolved (as Fe)	2.0 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Mercury, Total (as Hg)	ng/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
pH	8.5 SU	InstantMax			NoDis			NoDis			NoDis			NoDis	
pH	6.5 SU	InstantMin			NoDis			NoDis			NoDis			NoDis	
Solids, Total Dissolved (TDS)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Suspended (TSS)	20 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Solids, Total Suspended (TSS)	30 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Specific Conductance, Field	umh/cm	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Sulfate, Total (as SO4)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Temperature Difference Between Sample & Reference Point in F	0 Deg F	InstantMax			NoDis			NoDis			NoDis			NoDis	
Temperature Difference Between Sample & Reference Point in F	0 Deg F	InstantMax			NoDis			NoDis			NoDis			NoDis	
Temperature, Water (C)	Deg C	CalMoMax			NoDis			NoDis			NoDis			NoDis	

Surface Discharge Station SD012 (Pit 3 overflow channel outfall 110)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Arsenic, Total (as As)	ug/L	SingleVal			4.77			5.3			5.8			4.6	**5.118**
Bicarbonates (HCO3)	mg/L	SingleVal	187	189	180	180	177	169	162	152	175	180	176	188	**176.25**
Chloride, Total	mg/L	SingleVal	1.7	1.4	1.43	1.5	1.3	1.2	1.2	1.4	1.3	1.3	1.4	1.5	**1.386**
Cobalt, Total (as Co)	ug/L	SingleVal			<.2			<.2			<.2			<.2	
Fibers, Ambiguous	MF/L	SingleVal				<.13								<.2	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

DMR Summary Report

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Discharge Station SD012 (Pit 3 overflow channel outfall 110)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Fibers, Amphibole	MF/L	SingleVal				<.13								<.2	
Fibers, Chrysotile	MF/L	SingleVal				<.13								<.2	
Fibers, Non-Amphibole Non Chrysotile	MF/L	SingleVal				<.13								<.2	
Fibers, Total	MF/L	SingleVal				<.13								<.2	
Flow	MG	CalMoTot	0.067	.1	12.2	12.5	22.6	57.9	51.1	16.5	3.9	.3	5	3.1	**15.439**
Flow	mgd	CalMoMax	0.002	.003	.39	.42	.73	1.93	1.65	.53	.13	.04	.17	.1	**0.508**
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	223	189	180	180	177	169	162	152	175	180	176	188	**179.25**
Iron, Dissolved (as Fe)	1.0 mg/L	CalMoAvg			<.05			<.1			<.1			<.05	
Iron, Dissolved (as Fe)	2.0 mg/L	CalMoMax			<.05			<.1			<.1			<.05	
Mercury, Total (as Hg)	ng/L	SingleVal	<0.5	<.5	<.5	<.5	<.5	.55	<.5	.7	<.5	<.5	<.5	<.5	**0.625**
pH	8.5 SU	InstantMax			8.3			8.4			8.3			8.3	**8.325**
pH	6.5 SU	InstantMin			8.3			8.4			8.3			8.3	**8.325**
Solids, Total Dissolved (TDS)	mg/L	SingleVal	312	312	301	312	289	283	284	289	306	291	290	309	**298.167**
Solids, Total Suspended (TSS)	20 mg/L	CalMoAvg			1			<1			<1.2			2	**1.5**
Solids, Total Suspended (TSS)	30 mg/L	CalMoMax			1			<1			<1.2			2	**1.5**
Specific Conductance, Field	umh/cm	CalMoMax	501	563	442	484	455	446	437	444	362	473	468	382	**454.75**
Sulfate, Total (as SO4)	mg/L	SingleVal	84.6	82	78.5	79.4	75.9	74.9	72.6	77.3	77.9	81.3	78.7	80.2	**78.608**
Temperature Difference Between Sample & Reference Point in F	0 Deg F	InstantMax			1.3			-1.9			10			1.4	**2.7**
Temperature Difference Between Sample & Reference Point in F	0 Deg F	InstantMax			1.3			-1.9			10			1.4	**2.7**
Temperature, Water (C)	Deg C	CalMoMax			5.6			17			16.6			1.2	**10.1**

Surface Discharge Station SD013 (Pit 2W dewatering pipe outfall 120)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Arsenic, Total (as As)	ug/L	SingleVal			NoDis			NoDis			NoDis			NoDis	
Bicarbonates (HCO3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Chloride, Total	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Cobalt, Total (as Co)	ug/L	SingleVal			NoDis			NoDis			NoDis			NoDis	
Flow	MG	CalMoTot	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Flow	mgd	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Iron, Dissolved (as Fe)	1.0 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Iron, Dissolved (as Fe)	2.0 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Mercury, Total (as Hg)	ng/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

DMR Summary Report

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Discharge Station SD013 (Pit 2W dewatering pipe outfall 120)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
pH	8.5 SU	InstantMax			NoDis			NoDis			NoDis			NoDis	
pH	6.5 SU	InstantMin			NoDis			NoDis			NoDis			NoDis	
Solids, Total Dissolved (TDS)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Suspended (TSS)	20 mg/L	CalMoAvg			NoDis			NoDis			NoDis			NoDis	
Solids, Total Suspended (TSS)	30 mg/L	CalMoMax			NoDis			NoDis			NoDis			NoDis	
Specific Conductance, Field	umh/cm	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Sulfate, Total (as SO4)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	

Surface Discharge Station SD026 (2nd Creek headwaters culvert outfall 251)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
1,2-Dichloroethylene (cis-)	ug/L	SingleVal									<1				
Benzene	ug/L	SingleVal									<1				
Bicarbonates (HCO3)	mg/L	SingleVal	428	442	256	268	237	229	349	309	397	403	716	359	**366.083**
Boron, Total (as B)	ug/L	SingleVal			171			127			176			127	**150.25**
Calcium, Total (as Ca)	mg/L	SingleVal									88.3				**88.3**
Cations, Total	meq/L	SingleVal									13.5				**13.5**
Chloride, Total	mg/L	SingleVal	13.2	13	12.2	21.5	17.6	11.4	9.6	11	12.2	13	14.5	14.2	**13.617**
Chloroform	ug/L	SingleVal									<1				
Cobalt, Total (as Co)	ug/L	SingleVal			.72			<2			.28			.39	**0.463**
Ethylbenzene	ug/L	SingleVal									<1				
Flow	MG	CalMoTot	3.3	3.8	6.2	3.9	2.5	12	9.2	2.6	3.7	2.6	5.1	4.5	**4.95**
Flow	mgd	CalMoMax	0.11	.13	.2	.13	.08	.4	.3	.08	.12	.08	.17	.15	**0.163**
Fluoride, Total (as F)	mg/L	SingleVal			1.22			.7			1.2			1	**1.03**
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	631	442	256	268	237	229	349	309	397	403	531	359	**367.583**
Magnesium, Total (as Mg)	mg/L	SingleVal									92.1				**92.1**
Manganese, Total (as Mn)	ug/L	SingleVal			1770			874			272			971	**971.75**
Mercury, Total (as Hg)	ng/L	SingleVal				<.5		<.5		<.5		<.5			
Molybdenum, Total (as Mo)	ug/L	SingleVal			14.6			<10			16.9			9	**13.5**
Organics, Diesel Range as diesel, Total	ug/L	SingleVal	100	<80	80	<86	.00017	.17	120	140	<110	<100	<.1	<100	**73.362**
pH	8.5 SU	InstantMax	8.0	7.9	7.9	7.7	7.6	7.3	7.8	7.7	8	7.7	7.4	7.7	**7.725**
pH	6.5 SU	InstantMin	8.0	7.9	7.9	7.7	7.6	7.3	7.8	7.7	8	7.7	7.4	7.7	**7.725**
Potassium, Total (as K)	mg/L	SingleVal									6.3				**6.3**
Sodium, % Total Cations in meq/L	%	SingleVal									14.3				**14.3**
Sodium, Total (as Na)	mg/L	SingleVal									31.1				**31.1**

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

DMR Summary Report

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Discharge Station SD026 (2nd Creek headwaters culvert outfall 251)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Solids, Total Dissolved (TDS)	mg/L	SingleVal	770	748	769	611	549	471	620	520	675	738	730	729	**660.833**
Solids, Total Suspended (TSS)	30 mg/L	CalMoAvg	7	5	4	<1.2	2	4	7	3	3	3	2	3	**3.909**
Solids, Total Suspended (TSS)	60 mg/L	CalMoMax	7	5	4	<1.2	2	4	7	3	3	3	2	3	**3.909**
Specific Conductance, Field	1000 umh/cm	CalMoAvg	1160	1196	816	923	825	693	954	854	1019	1017	1033	979	**955.75**
Specific Conductance, Field	umh/cm	CalMoMax	1160	1196	816	923	825	693	954	854	1019	1039	1033	979	**957.583**
Sulfate, Total (as SO4)	mg/L	SingleVal	218	226	216	226	181	145	163	141	184	236	246	242	**202.0**
Tetrachloroethylene (Perchloroethylene)	ug/L	SingleVal									<1				
Toluene	ug/L	SingleVal									<1				
Trichloroethylene (TCE or Trichloroethene)	ug/L	SingleVal									<1				
Xylenes, Total	ug/L	SingleVal									<3				

Surface Discharge Station SD030 (Pit 5S overflow channel [unauthorized])

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Arsenic, Total (as As)	ug/L	SingleVal	4.12	3.77	3.77	3.3	NoDis	<.5	4.4	4.8	3.9	6	4	4.1	**4.216**
Bicarbonates (HCO3)	mg/L	SingleVal	178	179	88.6	173	NoDis	163	151	150	159	164	167	170	**158.418**
Chloride, Total	mg/L	SingleVal	2.78	2.15	2.18	2	NoDis	1.9	1.8	1.9	2	1.9	2.1	2	**2.065**
Cobalt, Total (as Co)	ug/L	SingleVal	<0.2	<.2	<.2	<.2	NoDis	<.2	<.2	<.2	<.2	<.2	<.2	<.2	
Fibers, Ambiguous	MF/L	SingleVal				<.13								.2	**0.2**
Fibers, Amphibole	MF/L	SingleVal				<.13								<.2	
Fibers, Chrysotile	MF/L	SingleVal				<.13								<.2	
Fibers, Non-Amphibole Non Chrysotile	MF/L	SingleVal				<.13								<.2	
Fibers, Total	MF/L	SingleVal				<.13								<.2	
Flow	0 MG	CalMoTot	0	0	0	0	NoDis	0	0	0	0	0	0	0	**0.0**
Flow	mgd	CalMoMax	0	0	0	0	NoDis	0	0	0	0	0	0	0	**0.0**
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	265	179	88.6	173	NoDis	163	151	150	159	164	167	170	**166.327**
Iron, Dissolved (as Fe)	mg/L	SingleVal	<0.050	<.05	<.05	<.05	NoDis	<.1	<.1	<.1	<.1	<.1	<.05	<.05	
Mercury, Total (as Hg)	ng/L	SingleVal	<0.5	<.5	<.5	<.5	NoDis	.85	.84	.73	<.5	<.5	<.5	<.5	**0.807**
pH	SU	InstantMax	8.4	8.4	8.2	8.1	NoDis	8.4	8.4	8.3	8.5	7.6	8.1	8.2	**8.236**
pH	SU	InstantMin	8.4	8.4	8.2	8.1	NoDis	8.4	8.4	8.3	8.5	7.6	8.1	8.2	**8.236**
Solids, Total Dissolved (TDS)	mg/L	SingleVal	337	333	337	288	NoDis	301	298	285	290	323	287	305	**307.636**
Solids, Total Suspended (TSS)	mg/L	SingleVal		2		.8		6		10		<1		5	**4.76**
Specific Conductance, Field	umh/cm	SingleVal	557	533	407	485	NoDis	460	433	449	437	482	475	364	**462.0**
Sulfate, Total (as SO4)	mg/L	SingleVal	102	98.3	94.9	92.1	NoDis	90.6	88.7	90	86.3	90.5	91.1	90	**92.227**

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Discharge Station SD030 (Pit 5S overflow channel [unauthorized])

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Temperature Difference Between Sample & Reference Point in F	Deg F	InstantMax			1.3	.14	NoDis	1.6	9.8	11.4	8.8	11.5	7.8		**6.543**
Temperature Difference Between Sample & Reference Point in F	Deg F	InstantMax			1.3	.14	NoDis	1.6	9.8	11.4	8.8	11.5	7.8		**6.543**
Temperature, Water (C)	Deg C	InstantMax			5.6	5.8	NoDis	18.9	27.1	26	22.7	12	6.3		**15.55**
Turbidity	NTU	SingleVal	0.45	.2	.65	1.4	NoDis	3	.8	2.5	.2	.32	1.5	4.2	**1.384**

Surface Discharge Station SD033 (Rail Culvert NE of Pit 5N Loadout Pocket)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Bicarbonates (HCO3)	mg/L	SingleVal	330	333	268	338	327	337	362	367	382	369	328	357	**341.5**
Chloride, Total	mg/L	SingleVal	4.92	4.62	4.52	3.8	3.7	3.7	3.7	4.2	4.3	4.3	4.4	4.6	**4.23**
Flow	MG	CalMoTot		9.2		16.3		38.4		22.5		38.1		11	**22.583**
Flow	mgd	CalMoMax		.32		.54		1.28		.72		1.23		.35	**0.74**
Hardness, Carbonate (as CaCo3)	mg/L	SingleVal	1330	333	268	338	327	337	362	367	382	369	328	357	**424.833**
Iron, Dissolved (as Fe)	1.0 mg/L	CalMoAvg		<.06		.06		<.1		<.1		<.1		<.05	**0.06**
Iron, Dissolved (as Fe)	2.0 mg/L	CalMoMax		<.06		.06		<.1		<.1		<.1		<.05	**0.06**
Mercury, Total (as Hg)	ng/L	SingleVal	0.5	.8	.6	.88	.71	1.3	.93	.77	2.3	.84	.62	.65	**0.908**
pH	8.5 SU	InstantMax		7.9		7.9		8.1		7.8		7.6		7.4	**7.783**
pH	6.5 SU	InstantMin		7.9		7.9		8.1		7.8		7.6		7.4	**7.783**
Silver, Total (as Ag)	ug/L	SingleVal			<.2			<.2			<.2			<.2	
Solids, Total Dissolved (TDS)	mg/L	SingleVal	2070	2000	2060	1760	1750	1640	1880	1870	1990	1940	1840	2170	**1,914.167**
Solids, Total Suspended (TSS)	20 mg/L	CalMoAvg		4		3		2		3		2		4	**3.0**
Solids, Total Suspended (TSS)	30 mg/L	CalMoMax		4		3		2		3		2		4	**3.0**
Specific Conductance, Field	umh/cm	SingleVal	2440	2450	1605	2129	2193	1532	2384	2518	2547	2204	2340	2540	**2,240.167**
Sulfate, Total (as SO4)	mg/L	SingleVal	1120	1170	1120	992	909	985	1100	1180	1180	1190	1180	1240	**1,113.833**
Turbidity	25 NTU	CalMoAvg		.7		1		.3		1		.26		1.4	**0.777**
Turbidity	NTU	CalMoMax		.7		1		.3		1		.26		1.4	**0.777**

Surface Water Station SW002 (Wyman Ck, DMIRR grade at CR 666, stn 702)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Fibers, Ambiguous	MF/L	SingleVal				<.2								<.2	
Fibers, Amphibole	MF/L	SingleVal				<.2								<.2	
Fibers, Chrysotile	MF/L	SingleVal				<.2								<.2	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Surface Water Station SW002 (Wyman Ck, DMIRR grade at CR 666, stn 702)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Fibers, Non-Amphibole Non Chrysotile	MF/L	SingleVal				<.2								<.2	
Fibers, Total	MF/L	SingleVal				<.2								<.2	
Flow, Stream, Instantaneous	cfs	SingleVal				8.4								5.18	**6.79**
Solids, Total Suspended (TSS)	mg/L	SingleVal				<1.2								13	**13.0**
Turbidity	NTU	SingleVal				2								12.7	**7.35**

Surface Water Station SW006 (Untreated HL city water supply, stn 700)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Fibers, Ambiguous	MF/L	SingleVal				<.2								<.2	
Fibers, Amphibole	MF/L	SingleVal				<.2								<.2	
Fibers, Chrysotile	MF/L	SingleVal				<.2								<.2	
Fibers, Non-Amphibole Non Chrysotile	MF/L	SingleVal				<.2								<.2	
Fibers, Total	MF/L	SingleVal				<.2								<.2	
Flow	mgd	SingleVal				0								0	**0.0**
Solids, Total Suspended (TSS)	mg/L	SingleVal				2								<1.2	**2.0**
Turbidity	NTU	SingleVal				2.8								4	**3.4**

Surface Water Station SW007 (E Branch Wyman Creek at FR 117)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Flow, Stream, Instantaneous	cfs	CalMoAvg	0.006	.2	3.61	3.9	4.86	12.9	7.4	1.9	.18	.13	2.6	2	**3.307**
Flow, Stream, Instantaneous	cfs	CalMoMax	0.006	.2	3.61	3.9	4.86	12.9	7.4	1.9	.18	.13	2.6	2	**3.307**
Temperature, Water (C)	Deg C	CalMoAvg	0.1	.1	4.9	5.8	12.4	18.1	21.7	19.6	14.4	5.6	2	.4	**8.758**
Temperature, Water (C)	Deg C	CalMoMax	0.1	.1	4.9	5.8	12.4	18.1	21.7	19.6	17.8	5.6	2	.4	**9.042**

Waste Stream Station WS001 (Knox Refueling Area pipe station 801)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Flow	MG	CalMoTot	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	
Flow	mgd	CalMoMax	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	
Organics, Diesel Range as diesel, Total	ug/L	CalMoMax	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	
Solids, Total Suspended (TSS)	mg/L	CalMoMax	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)
First DMR in Delta: 7/1999

Waste Stream Station WS001 (Knox Refueling Area pipe station 801)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Water Level At Sample Collection Time	feet	CalMoMax	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	NoFlo	

Waste Stream Station WS002 (Ligninsulfonate as applied)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
2,3,7,8,-Tetrachlorodibenzofuran	ug/L	SingleVal												NoFlo	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	ug/L	SingleVal												NoFlo	
Bicarbonates (HCO3)	mg/L	SingleVal												NoFlo	
BOD, Carbonaceous 05 Day (20 Deg C)	mg/L	SingleVal												NoFlo	
Calcium, Total (as Ca)	mg/L	SingleVal												NoFlo	
Chloride, Total	mg/L	SingleVal												NoFlo	
COD (Chemical Oxygen Demand)	mg/L	SingleVal												NoFlo	
Flow	0.1 MG	CalYrMax												NoFlo	
Magnesium, Total (as Mg)	mg/L	SingleVal												NoFlo	
Mercury, Total (as Hg)	ug/L	SingleVal												NoFlo	
Nitrogen, Ammonia, Total (as N)	mg/L	SingleVal												NoFlo	
pH, Field	SU	SingleVal												NoFlo	
Phenols, Total	ug/L	SingleVal												NoFlo	
Phosphorus, Total (as P)	mg/L	SingleVal												NoFlo	
Sodium, Total (as Na)	mg/L	SingleVal												NoFlo	
Solids, Total Dissolved (TDS)	mg/L	SingleVal												NoFlo	
Specific Conductance, Field	umh/cm	SingleVal												NoFlo	
Sulfate, Total (as SO4)	mg/L	SingleVal												NoFlo	
Zinc, Total (as Zn)	mg/L	SingleVal												NoFlo	

Waste Stream Station WS003 (Coherex as applied)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
BOD, Carbonaceous 05 Day (20 Deg C)	mg/L	SingleVal												NoFlo	
Chloride, Total	mg/L	SingleVal												NoFlo	
COD (Chemical Oxygen Demand)	mg/L	SingleVal												NoFlo	
Flow	0.1 MG	CalYrMax												NoFlo	
Mercury, Total (as Hg)	ug/L	SingleVal												NoFlo	
Methylene Blue Active Substances (Surfactants)	mg/L	SingleVal												NoFlo	

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Cliffs Erie - Hoyt Lakes Mining Area (MN0042536)

First DMR in Delta: 7/1999

Waste Stream Station WS003 (Coherex as applied)

Parameter Name	Limit and Units	Limit Type	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12	Ave
Naphthalene	ug/L	SingleVal												NoFlo	
Organics, Diesel Range as diesel, Total	ug/L	SingleVal												NoFlo	
Phosphorus, Total (as P)	mg/L	SingleVal												NoFlo	
Pyrene	ug/L	SingleVal												NoFlo	
Solids, Total Dissolved (TDS)	mg/L	SingleVal												NoFlo	
Specific Conductance, Field	umh/cm	SingleVal												NoFlo	
Sulfate, Total (as SO4)	mg/L	SingleVal												NoFlo	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.